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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,546	12/23/2003	Gaku Ehara	031350	5792

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EXAMINER

TONGUE, LAKIA J

ART UNIT	PAPER NUMBER
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1645

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/743,546	Applicant(s) EHARA ET AL.	
	Examiner Lakia J Tongue	Art Unit 1645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 8/16/2004 is being considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 -6 are rejected under 35 U.S.C. 103(a) as being obvious over Ebara, T. et al (JP 2002-355030).

The claims are drawn to a process for producing sporangia of *Bacillus popilliae* containing spores and parasporal bodies by culturing *Bacillus popilliae* in a liquid medium containing an adsorbent and 0.1-0.7% by weight of proline.

Ebara et al discloses an invention that relates to the manufacture approach of sporangium containing the spore and the Pallas PORARU body of bacillus POPIRIE that has the prevention effectiveness to the Scarabaeidae insect by cultivating the bacillus belonging to bacillus POPIRIE (*Bacillus popilliae*, 0011) by the culture medium (0001).

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The instant application teaches examples of components contained in such known liquid media including nitrogen sources, carbon sources and inorganic salts. Examples of nitrogen sources include inorganic nitrogen sources normally used for culturing microorganisms such as ammonia, nitric acid and salts thereof, and organic nitrogen sources such as peptones, meat extract, fish extracts, lactalbumin hydrolyzates and yeast extract (page 8-9 of the instant application). Ebara et al disclose that it is desirable that the nitrogen source needed for usual microbial cultivation besides glutamic acid is added by the culture medium used for the invention. As a nitrogen source, sources of organic nitrogen, such as the peptone and meat extract which are used for culture of a microorganism, fish meat extracts, a lactalbumin hydrolyzate, or yeast extract are usually mentioned. As the other nitrogen source, sources of inorganic nitrogen, Ebara et al disclose a desirable mass below 5% and since the concentration in the culture medium of the nitrogen source used for this invention presents the growth facilitatory effect of the more desirable bacillus is 0.2-4.0 mass % (0019).

Furthermore, Ebara et al disclose in their invention the carbon source needed for the usual microbial cultivation may be added by the culture medium used for this invention. Saccharides, such as trehalose and shoe cloth, are mentioned as a carbon source. Moreover, agricultural production trash, such as blackstrap molasses, a starch decomposition product, and cheese whey, can also be used. The addition concentration of these carbon sources will not be limited especially if there is in the range which attains the effectiveness of this invention, but since it presents the growth facilitatory

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effect of the more excellent bacillus, its 0.001 - 5 mass % is desirable to a culture medium. However, in order to make the sporangium containing a spore and the Pallas PORARU body form, as for the glucose concentration contained in a culture medium, it is desirable to carry out to below 0.01 mass % to a culture medium preferably [existence of a glucose] (022).

Additionally, Ebara et al, discloses the above invention which offers glutamic acid and a prevention effectiveness to the Scarabaeidae insect characterized by cultivating the included culture medium for 0.2 to 4.0 mass % and an adsorbent (0009). Ebara et al, further discloses that the rate of glutamic acid to all the amino acid in a culture medium has a desirable mass of 35-90 % (0020). Ebara et al, also discloses the growth of a bacillus and the rate of sporangium-izing which were excellent in adding a pyruvic acid to a culture medium (0024). The concentration of a pyruvic acid is 0.01 to 0.5 mass % (0025). Ebara et al disclose in their invention that all amino acids shall point out the set of 16 kinds of isolation mold amino acid which consists of the alanine by which being contained in the nitrogen source used for usual culture media, such as a peptone and yeast extract, an arginine, an aspartic acid, glutamic acid, a glycine, an isoleucine, a leucine, a lysine, a methionine, a phenylalamine, a praline, a serine, a threonine, histidines, thyrosins and valines (0021). It has been taken to mean that the above amino acids have a desirable mass of 35-90%. Ebara et al disclose the culture medium used for the manufacture approach of this invention may be a liquid or may be a solid medium (0026).

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Lastly, Ebara et al, discloses a strain which shows growth inhibition or insect-killing activity to the larva of the Scarabaeidae insect also in the strain belonging to bacillus POPIRIE (Bacillus popilliae) bacillus POPIRIE SEMADARA (it popilliaeSemadara(s) Bacillus [] --) FERM P-16818 and a bacillus POPIRIE bean (it Mame(s) Bacillus popilliae var. popilliae [] --) FERM P-17661 and bacillus POPIRIE HIME (it Hime(s) Bacillus popilliae var. popilliae [] --) FERM P-17660 and a bacillus POPIRIE cherry (it Sakura(s) Bacillus popilliae var. popilliae [] --) FERM P-17662 and bacillus POPIRIE DEYUTOKI (it Dutk(ies) Bacillus popilliae [] --) ATCC No.14706, bacillus POPIRIE MERORONSA (Bacillus popilliae subsp. melolonthae), etc. are mentioned (0032).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lakia J Tongue whose telephone number is 571-272-2921. The examiner can normally be reached on Monday-Friday 7-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette Smith can be reached on 571-272-0864. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ljt


MARK NAVARRO
PRIMARY EXAMINER